



ANALYSIS OF DISTAL RADIUS FRACTURES SURGICAL TREATMENT

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INTRODUCTION

Distal radius fractures usually occur in 2–2,5cm distance from the radiocarpal joint space. In older patients, they are one of the most common osteoporotic fractures, usually caused by a standing level fall onto a hand in a dorsally outstretched position. In younger patients they are most often acquired from sport injuries and traffic accidents.



INTRODUCTION

TREATMENT METHODS



Kirschner wires/CRPP

- ▶ **Non-operative treatment**
- ▶ **Operative treatment**
 - **LCP (Locking Compression Plate)/ ORIF (Open Reduction Internal Fixation)**
 - **Kirschner wires/K-wires/CRPP (Closed Reduction Percutaneous Pinning)**
 - **External fixation**



LCP/ORIF





External fixation



AO/OTA Classification

Extra articular 	23-A1 ulna, radius intact   	23-A2 radius, simple and impacted   	23-A3 radius, multifragmentary   
Partially articular 	23-B1 radius, sagittal   	23-B2 radius, frontal, dorsal rim   	23-B3 radius, frontal, volar rim   
Complete articular 	23-C1 simple, metaphyseal simple   	23-C2 simple, metaphyseal multifragmentary   	23-C3 multifragmentary   

STUDY AIM

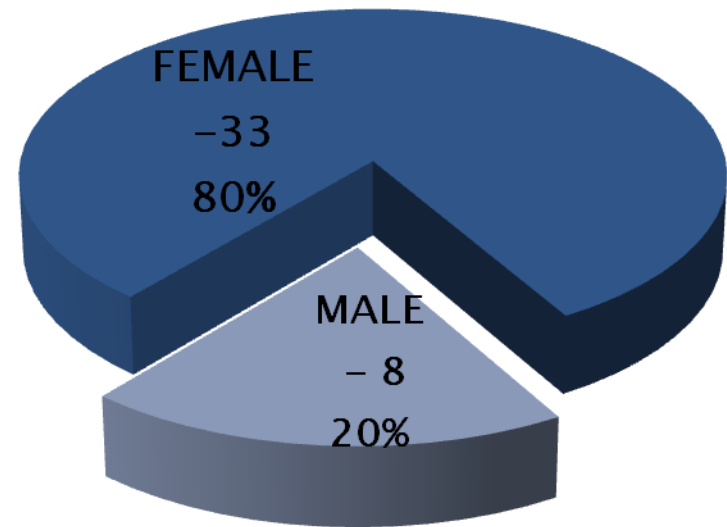
- ▶ Analysing cases of distal radius fractures
- ▶ Analysing methods of distal radius fractures surgical treatment
- ▶ Finding and analysing correlations concerning it



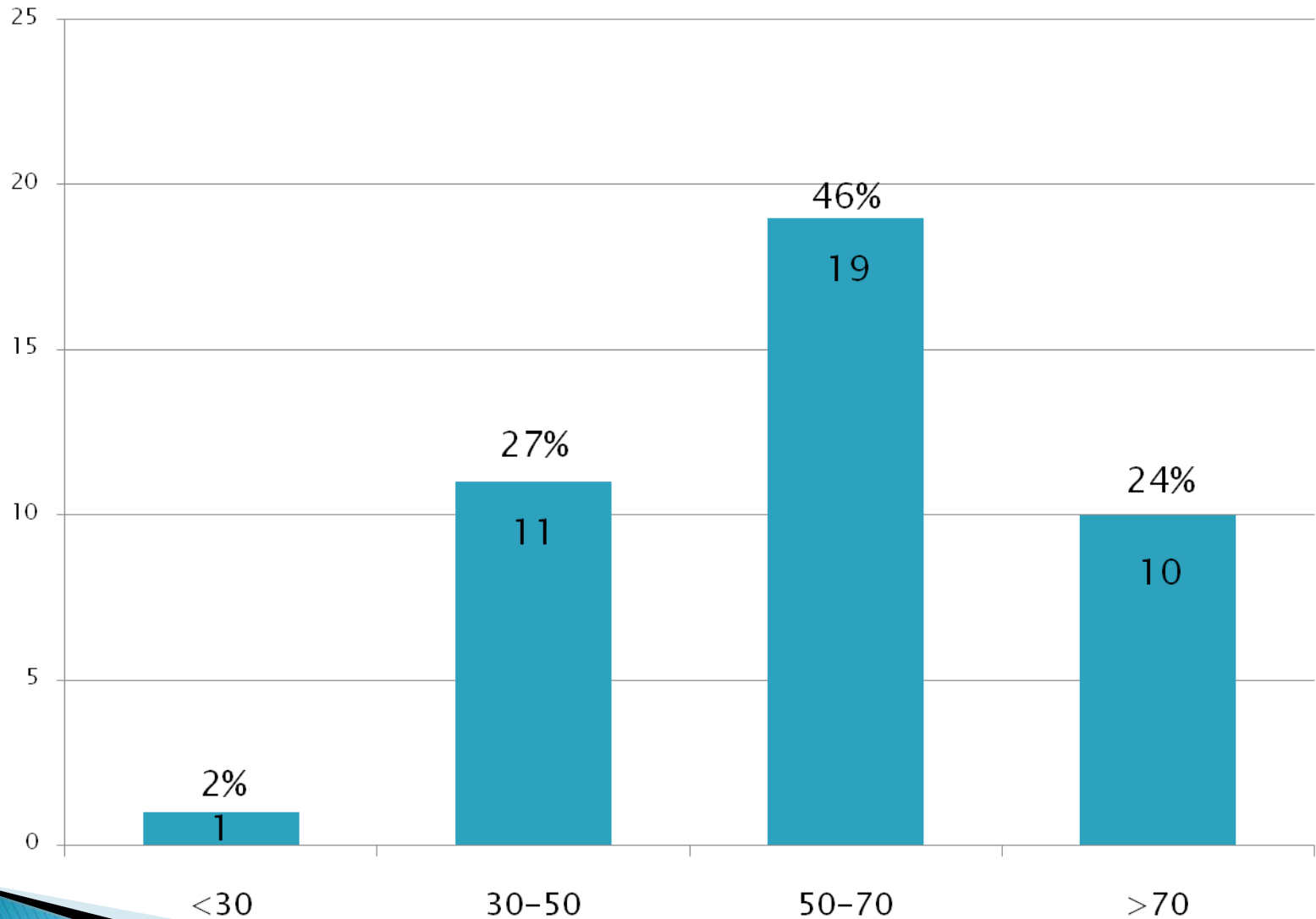
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Methods and materials

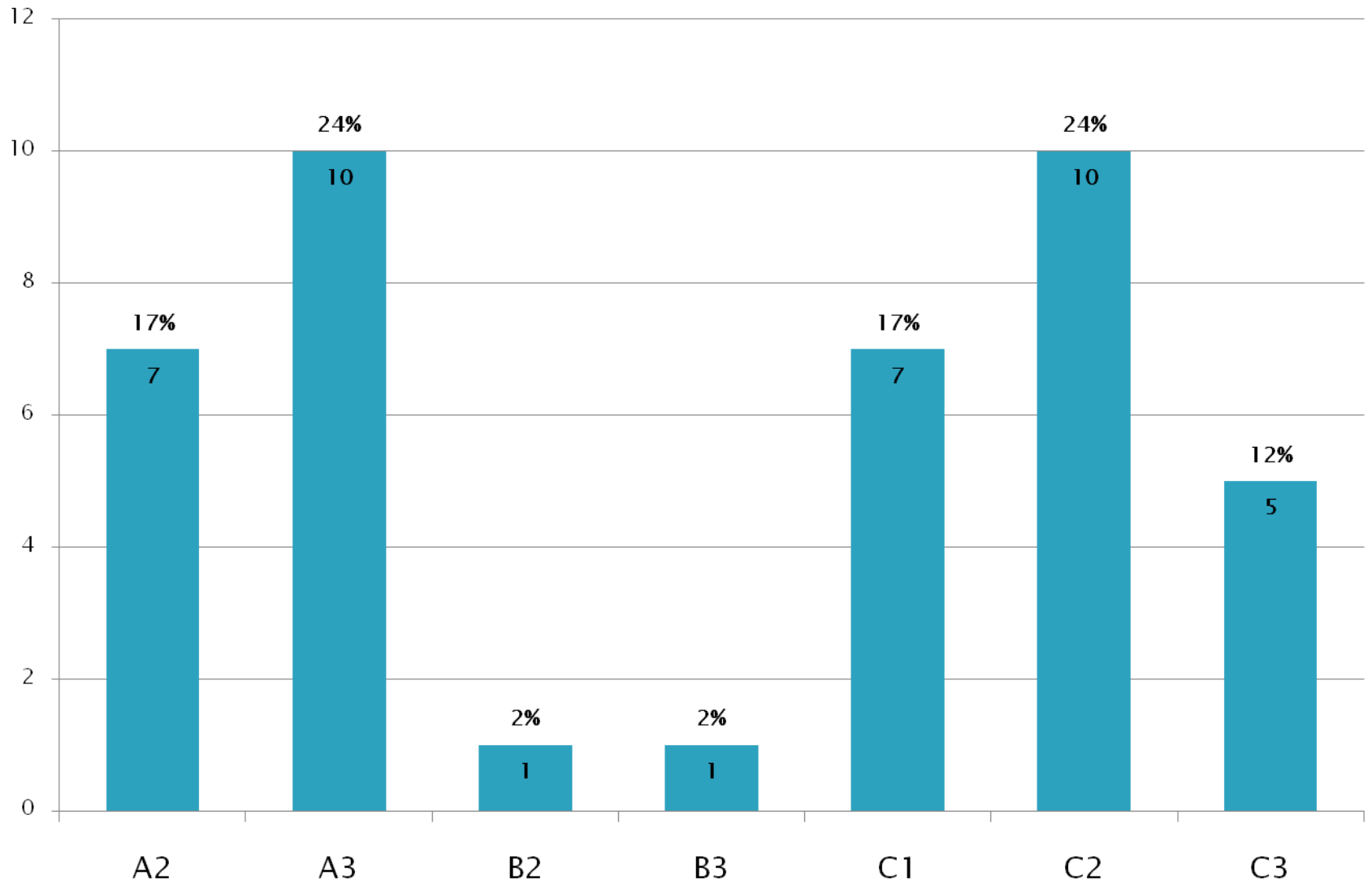
The study group consisted of 41 cases from 40 adult patients (20% male and 80% female), all of which were treated in Department of Orthopaedics and Traumatology, Upper Silesian Medical Centre, Medical University of Silesia in Katowice in 2019.



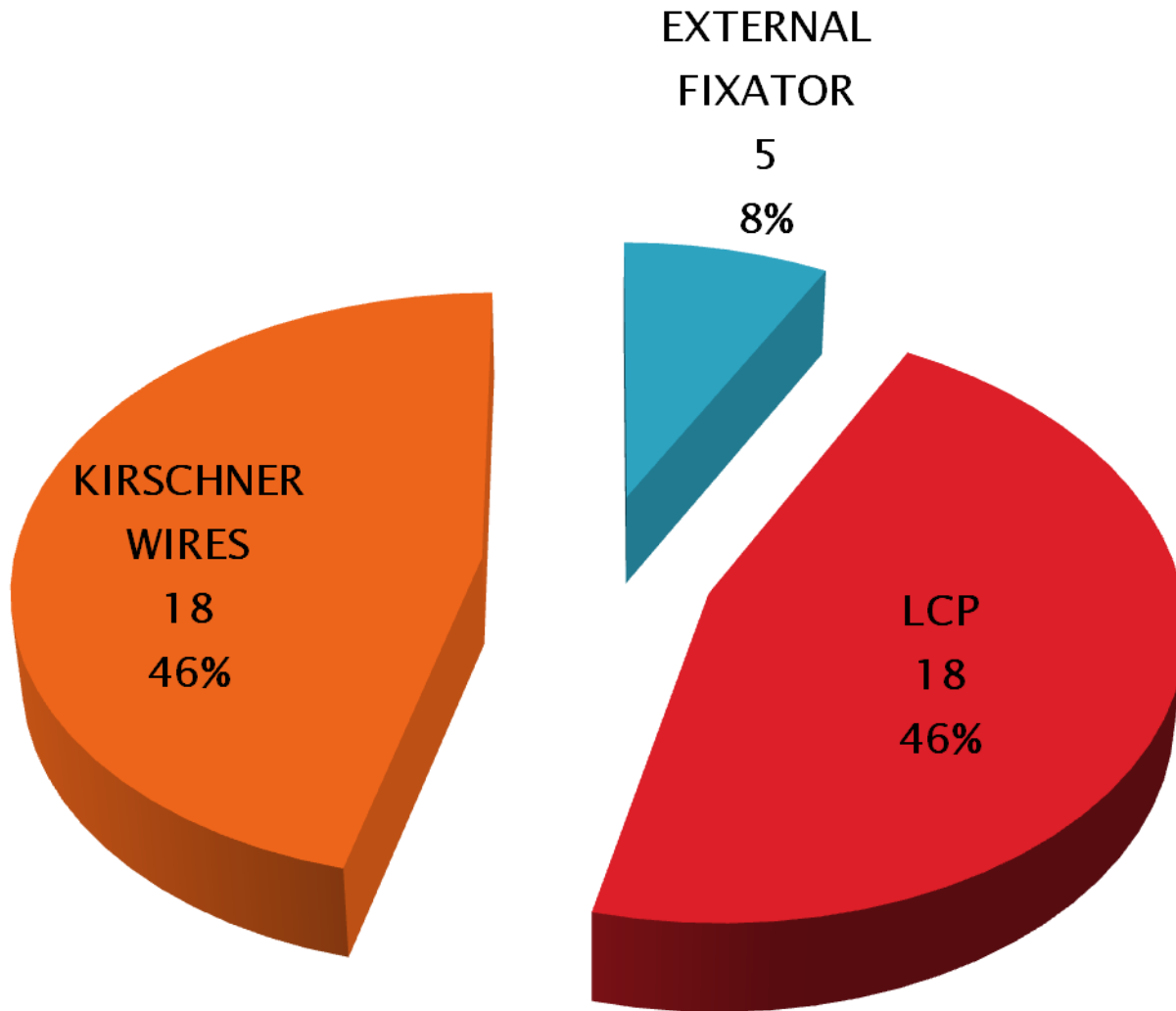
Age groups of patients



AO/OTA cases



Surgery methods used



RESULTS

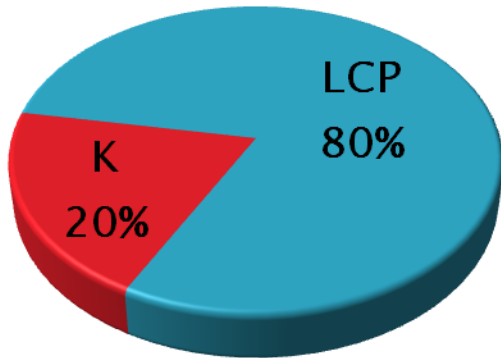
Correlation between AO/OTA fracture type and fixation method

		K	LCP	Stab.
A	A1	0	0	0
	A2	6	2	0
	A3	7	3	0
B	B1	0	0	0
	B2	0	1	0
	B3	0	1	0
C	C1	3	4	0
	C2	2	7	1
	C3	0	0	4

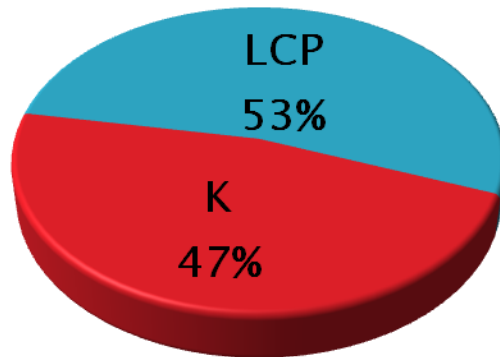
RESULTS

Correlation between patient's age and fixation method

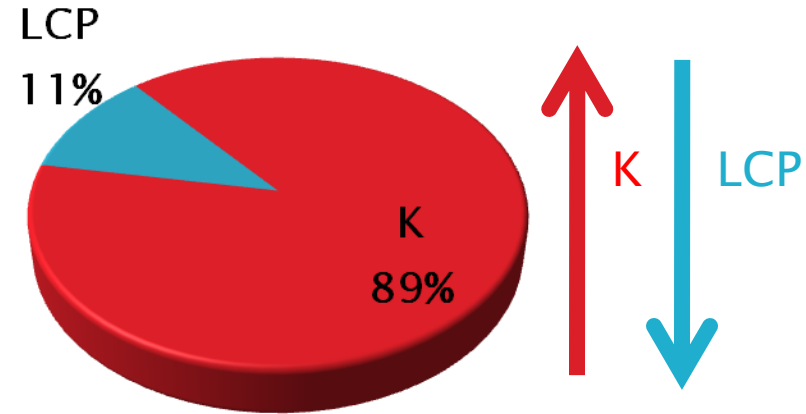
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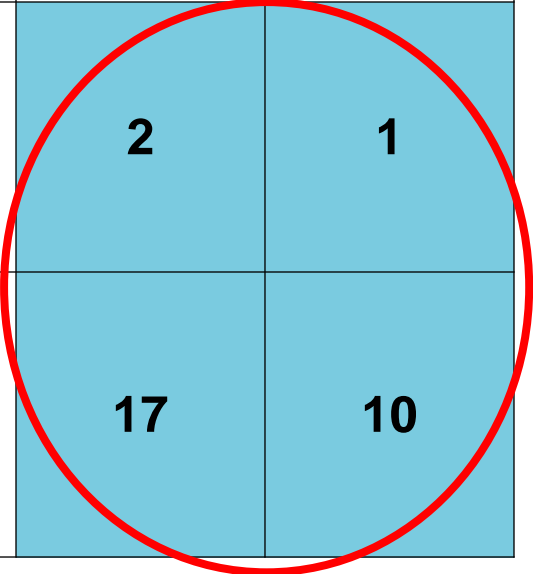
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RESULTS

Patient's sex in specific age groups

	<30	30-50	50-70	>70
M	1	5	2	1
F	0	6	17	10



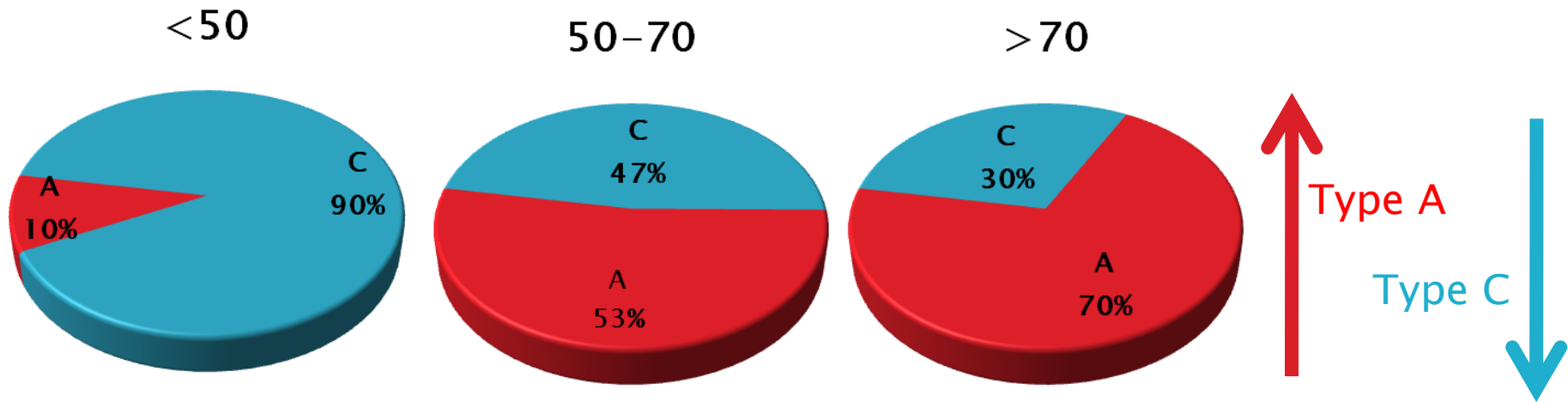
RESULTS

Correlation between AO/OTA fracture type and patient's sex

		M	F
A	A1	0	0
	A2	0	8
	A3	0	10
B	B1	0	0
	B2	0	1
	B3	1	0
C	C1	3	4
	C2	1	9
	C3	3	1

RESULTS

Correlation between AO/OTA fracture type and patient's age



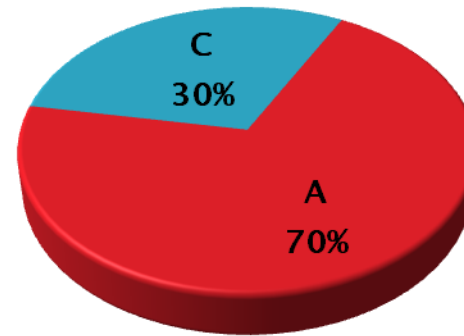
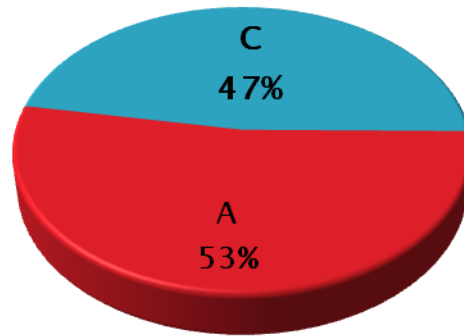
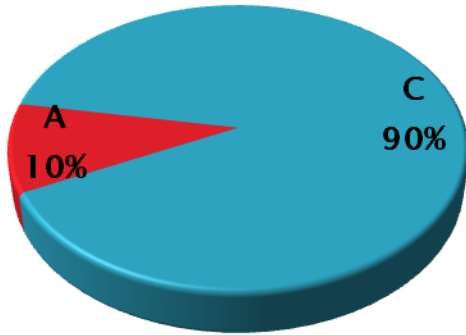
RESULTS

Both increasing trends

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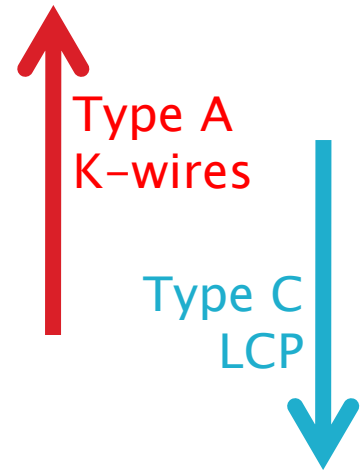
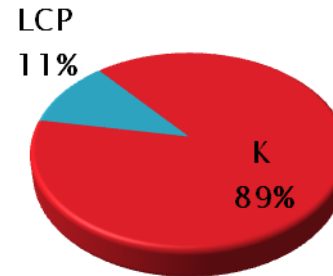
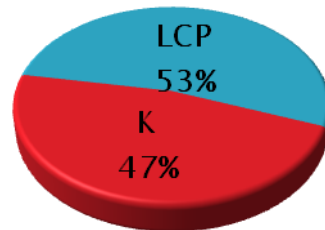
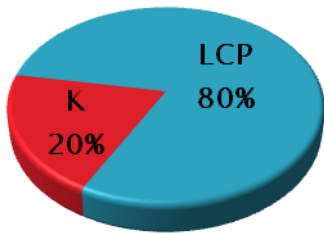
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Conclusions

- ▶ Older age, as well as female sex, and thus increased susceptibility to osteoporotic fractures, predispose to type A fractures. Older age also predisposes to use K-wires, which is a less strenuous solution.
 - ▶ Younger patients more often experienced type C fractures, usually requiring stabilization with an LCP.
 - ▶ External fixation is preferred for small fragment-comminuted fractures.
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